



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/620,342	07/17/2003	Koichi Kimura	116608	8669
25944	7590	07/13/2004		
OLIFF & BERRIDGE, PLC P.O. BOX 19928 ALEXANDRIA, VA 22320			EXAMINER	TRAN, BINH Q
			ART UNIT	PAPER NUMBER
				3748

DATE MAILED: 07/13/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/620,342	KIMURA ET AL.	
	Examiner	Art Unit	
	BINH Q. TRAN	3748	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on _____.
- 2a) This action is **FINAL**. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1,2 and 6-11 is/are rejected.
- 7) Claim(s) 3-5 is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) Notice of References Cited (PTO-892)
- 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 07/08/04.
- 4) Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) Notice of Informal Patent Application (PTO-152)
- 6) Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(c) the invention was described in-

(1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effect under this subsection of a national application published under section 122(b) only if the international application designating the United States was published under Article 21(2)(a) of such treaty in the English language; or

(2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that a patent shall not be deemed filed in the United States for the purposes of this subsection based on the filing of an international application filed under the treaty defined in section 351(a).

Claims 1-2, and 6-11 are rejected under 35 U.S.C. 102 (b) as being anticipated by Takeshima et al. (Takeshima) (Patent Number 5,473,890).

Regarding claims 1, Takeshima discloses a exhaust emission purification device (20) for an internal combustion engine (10), comprising: a sulfur component holding agent (18) arranged in the exhaust path of the internal combustion engine for holding a sulfur component; a NOx holding agent (19) arranged downstream of said sulfur component holding agent in the exhaust gas for holding NOx and the sulfur components when the air-fuel ratio of the exhaust gas flowing thereinto is lean; and a reducing agent adding means (e.g. 60) for adding a reducing agent to the exhaust gas flowing into said NOx holding agent; wherein the concentration of the sulfur component in the reducing agent added by said reducing agent adding means is lower than

Art Unit: 3748

the concentration of the sulfur component in the fuel supplied to a combustion chamber of the internal combustion engine (e.g. See col. 11, lines 16-67; col. 12, lines 1-30).

Regarding claims 2, Takeshima further discloses a bypass (24) for bypassing said NOx holding agent (19) and a flow rate regulation valve (27) for controlling the flow rate of the exhaust gas flowing into said bypass, wherein said sulfur component holding agent holds the sulfur component in the exhaust gas flowing thereinto in the case where the sulfur component holding conditions are satisfied, and releases said sulfur component held thereby in the case where the sulfur component releasing conditions are satisfied, and wherein the sulfur releasing conditions are caused to be satisfied and the greater part of the exhaust gas flows into said bypass in the case where the sulfur component is released from said sulfur component holding agent (e.g. See col. 19, lines 25-53; col. 22, lines 17-67; col. 23, lines 1-67).

Regarding claims 6, Takeshima further discloses that the NOx holding agent is carried on a particulate filter capable of trapping particulates contained in the exhaust gas flowing thereinto (e.g. See col. 4, lines 19-67; col. 5, lines 1-50).

Regarding claims 7, Takeshima further discloses that the concentration of the sulfur component in said reducing agent is substantially zero.

Regarding claims 8, Takeshima further discloses that the reducing agent is selected one of light oil and methane (e.g. See col. 11, lines 16-67; col. 12, lines 1-30).

Regarding claims 9, Takeshima further discloses that the reducing agent is stored in a tank different from the tank for storing the fuel supplied to the combustion chamber of the internal combustion engine (e.g. See col. 11, lines 16-67; col. 12, lines 1-30).

Art Unit: 3748

Regarding claims 10, Takeshima further discloses that the reducing agent is changed in quality from the fuel supplied to the combustion chamber of the internal combustion engine (e.g. See col. 11, lines 16-67; col. 12, lines 1-30).

Regarding claims 11, Takeshima further discloses a tank having two fuel supply paths including a fuel supply path for supplying the fuel to the combustion chamber of the internal combustion engine and a fuel supply path for supplying the fuel to said reducing agent adding means, and a desulfurizing unit, for changing the quality of the fuel, arranged in the fuel supply path for supplying the fuel to said reducing agent adding means (e.g. See col. 11, lines 16-67; col. 12, lines 1-30).

Allowable Subject Matter

Claims 3-5 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Since allowable subject matter has been indicated, applicant is encouraged to submit formal drawings in response to this Office action. The early submission of formal drawings will permit the Office to review the drawings for acceptability and to resolve any informalities remaining therein before the application is passed to issue. This will avoid possible delays in the issue process.

Prior Art

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure and consists of three patents:

Hirota et al. (Patent Number 6233925), Wakamoto (Patent Number 6199372), and Hirota et al. (Patent Number 6192675) all discloses an exhaust gas purification for use with an internal combustion engine.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Binh Tran whose telephone number is (703) 305-0245. The examiner can normally be reached on Monday-Friday from 8:30 a.m. to 5:00 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas E. Denion, can be reach on (703) 308-2623. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9306 for regular communications and for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-0861.



BT
July 08, 2004

Binh Tran
Patent Examiner
Art Unit 3748